

U. S. ARMY TARGETS MANAGEMENT OFFICE



PURPOSE:

U. S. Army Aerial Target
Programs: Status / Plans

BRIEFER:

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Targets Management Office

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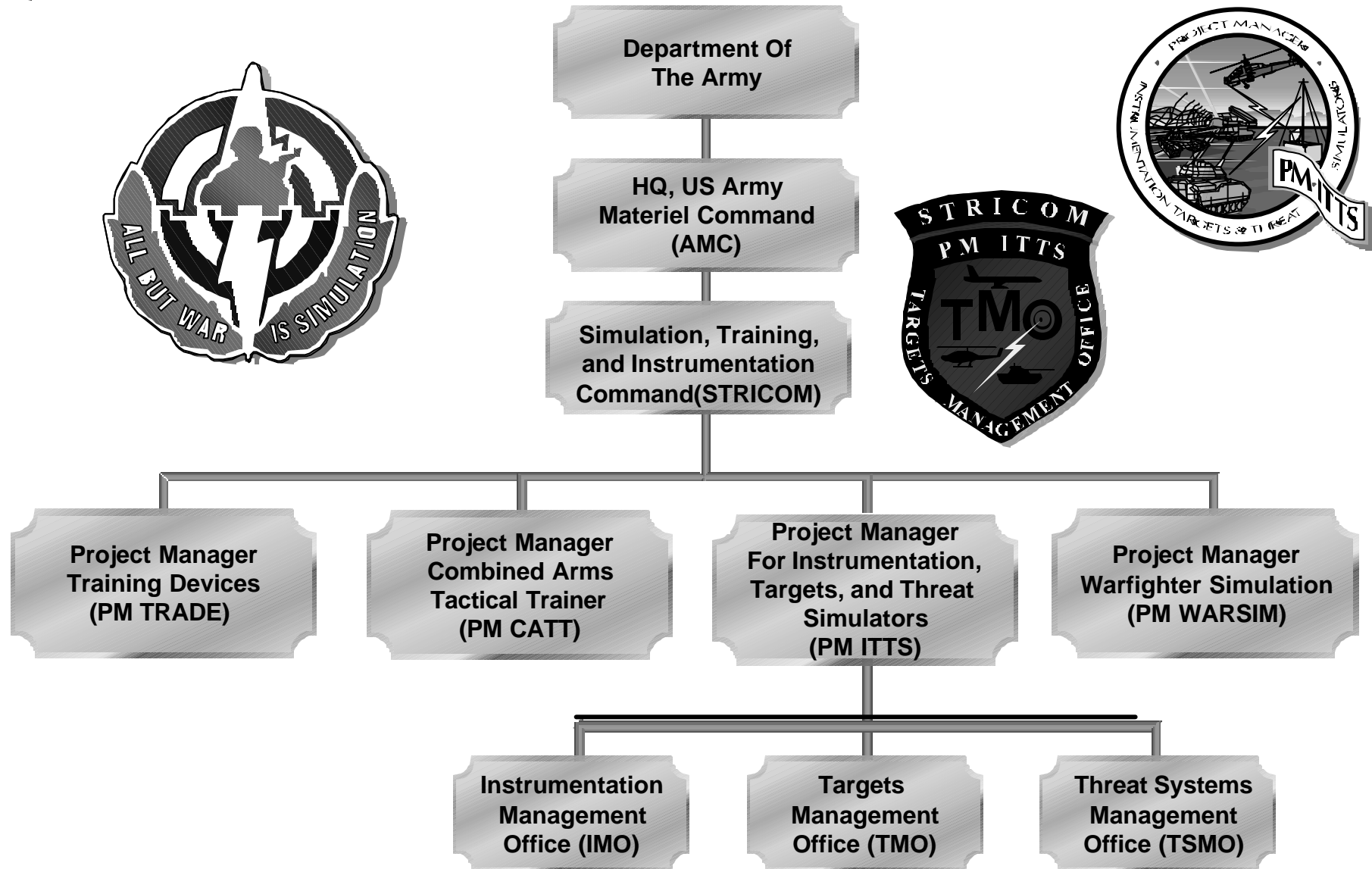
TARGETS MANAGEMENT OFFICE

OUTLINE



- Introduction
- Target Approach
- Aerial Targets
- Emerging Requirements
- Summary

Targets Management Office Chain Of Command...





Project Manager, Instrumentation, Targets and Threat Simulators...



PM ITTS

COL Matthew J. Fair
Project Manager for Instrumentation,
Targets, and Threat Simulators
Mr. Jerry Sirmans
Deputy Project Manager

IMO

Mr. J. Russell Longenbach
Instrumentation
Management Office



TMO

LTC Michelle F. Yarborough
Targets
Management Office



TSMO

Mr. Mark C. Tuten
Threat Systems
Management Office



TMO Mission...

We Are A Service Organization Driven By Customer Requirements

Develop, Acquire, Field, Operate and Maintain:

Aerial Targets
Auxiliary/Ancillary Equipment
Short Range Theater Ballistic Missile Targets
Range Targetry
Mobile Ground Targets
Virtual Targets

DoD Reliance Lead:

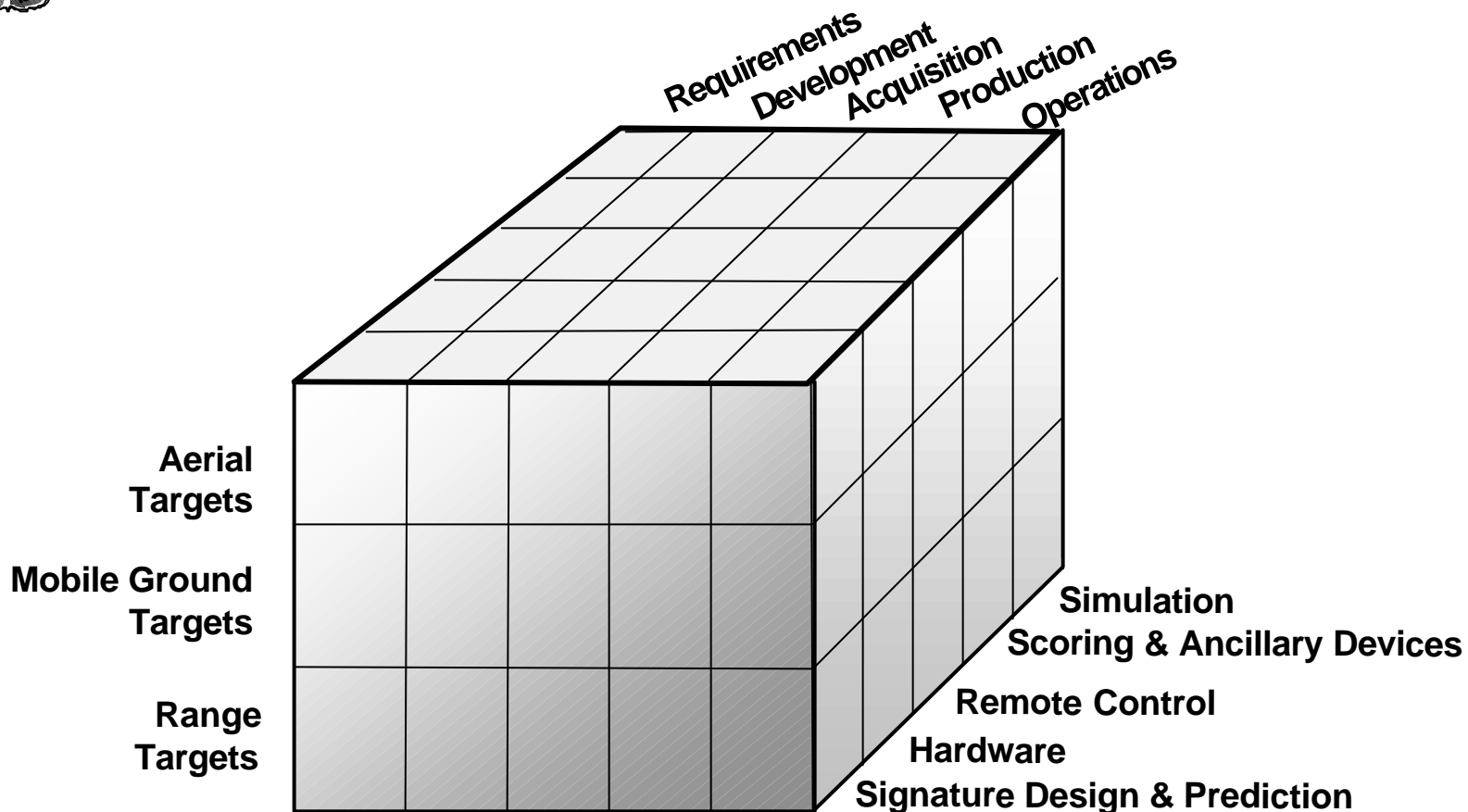
Rotary Wing Aerial Targets
Mobile Ground Targets
Legacy Programs





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TMO's MULTI-DIMENSIONAL APPROACH





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ARMY TARGET TRENDS



- Actual hardware procurement and destruction “resource intensive”
- *Reliance*: real and growing.
- Added Emphasis on Modeling and Simulation.
- Common Digital Architecture and other technology changes.
- Focus on fidelity to adequately stress sophisticated weapon system sensors.
- Validation
- Working to leverage training and testing.



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TARGET USAGE PHILOSOPHY



TEST & EVALUATION TARGET

- **Objective:** Sufficient representation to meet need.
- Full-scale target only when essential.
- Subscales used for Quality Assurance (QA) missions.
- Mobile ground targets are actual threat vehicles and surrogates.
- Scoring provided to assess weapon effectiveness.

Leverage

TRAINING TARGET

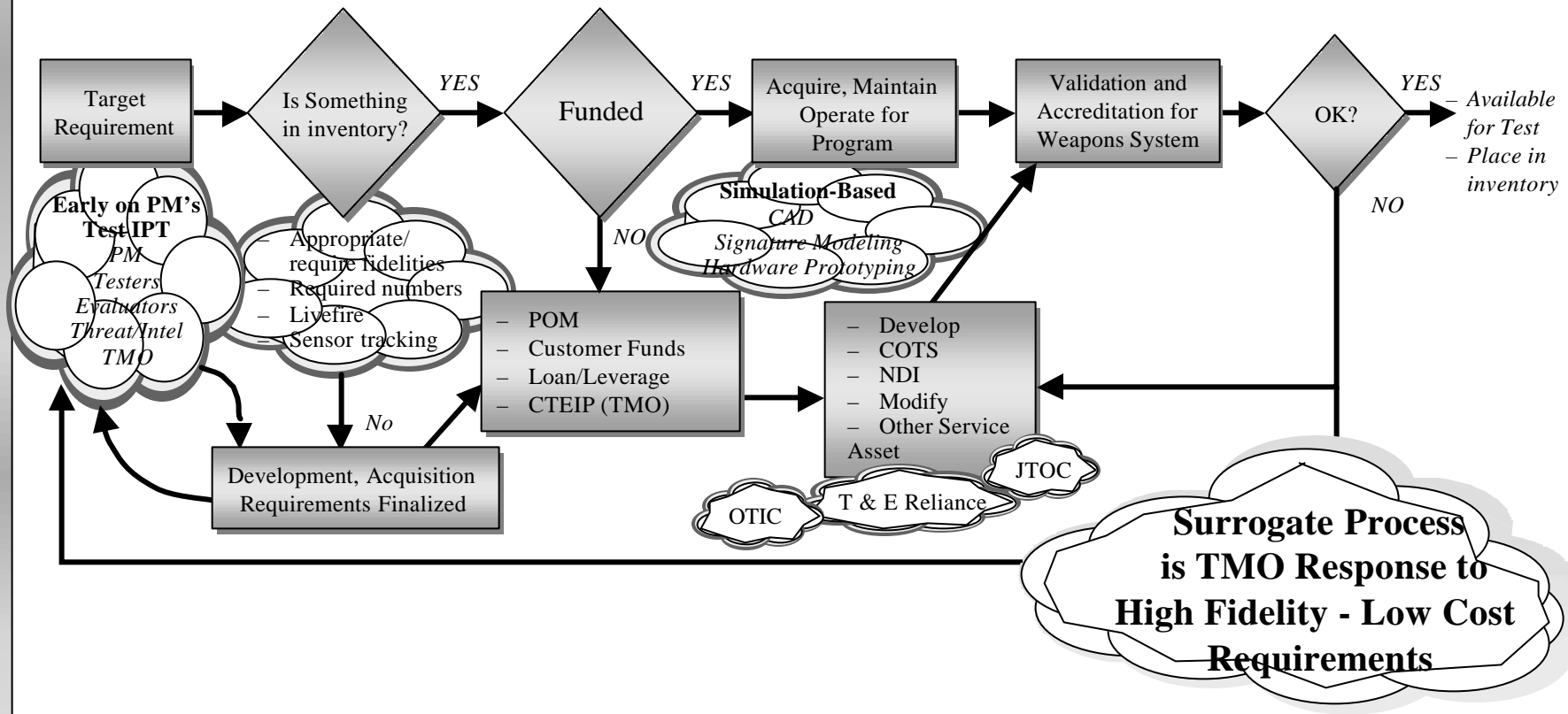
QA Testing
fired by troops
as training

- **Objective:** Highest fidelity possible while controlling cost.
- Heavy use of towed and miniature targets.
- No full-scale aerial targets.
- Scoring provided to assess proficiency.



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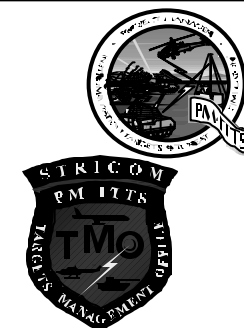
SURROGATE DEVELOPMENT PROCESS





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SURROGATE VALIDATION PROCESS



OSD OVERSIGHT

Validation IPT Established

- Chairman: TEMA
 - TMO
 - User Representation
 - NGIC
 - ATEC
 - Weapon System Developers

Design Specification Validation Review

- Document that design meets user needs
- Compare design to approved threat intelligence data; document differences
- Accesses the difference & show potential impacts

Validation Report Generation

- Validation Procedures
- Threat Description
- Surrogate Description
- Difference & Impacts
- Conclusion & Recommendation

*OSD
Approval*

MS 0

MS I/II

MS III

Process has successfully been implemented



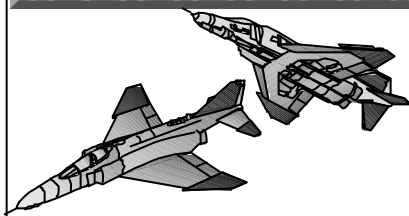
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ARMY AERIAL TARGETS

FIXED WING

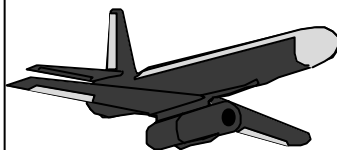


QF-4



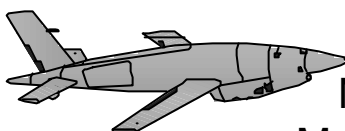
Managed &
Provided by
the Air Force

MQM-107



Army
Managed

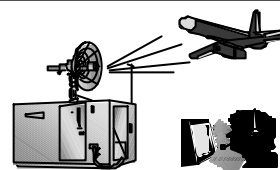
BQM-34



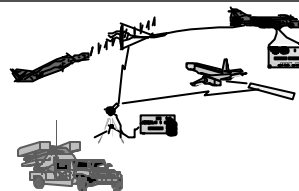
Navy
Managed

May be replaced by
a single target or
combination of
targets ~ FY07

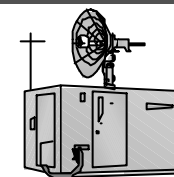
COMBINED FLIGHT SERVICES



SCORING SERVICES



TTCS



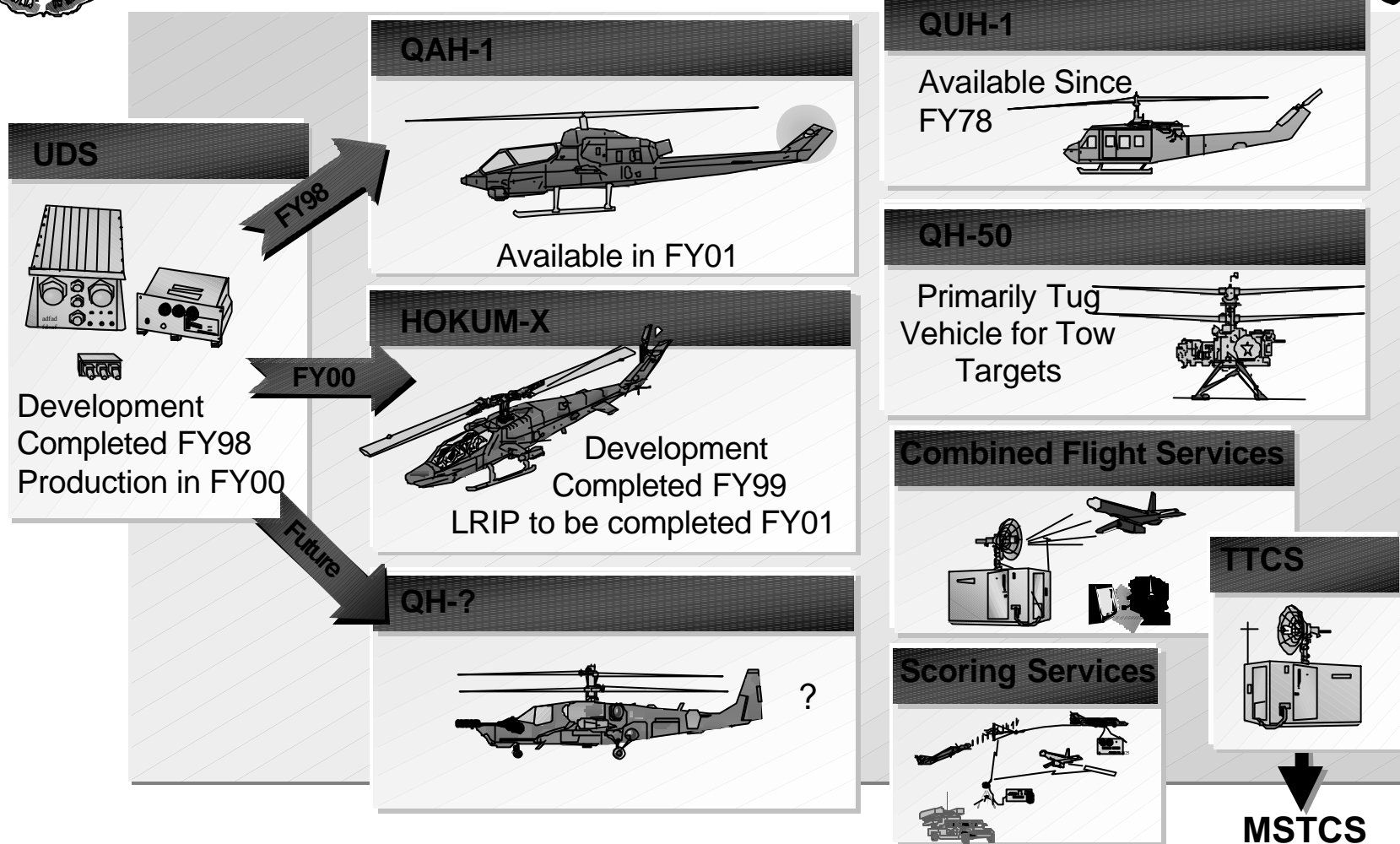
MSTCS



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ARMY AERIAL TARGETS

ROTARY WING

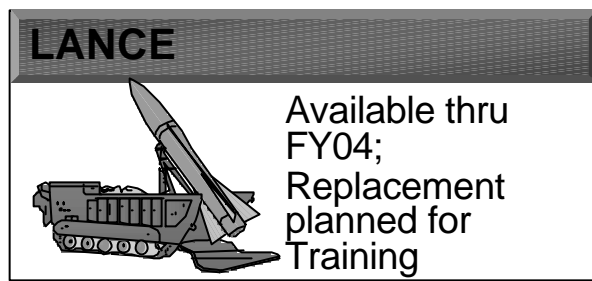
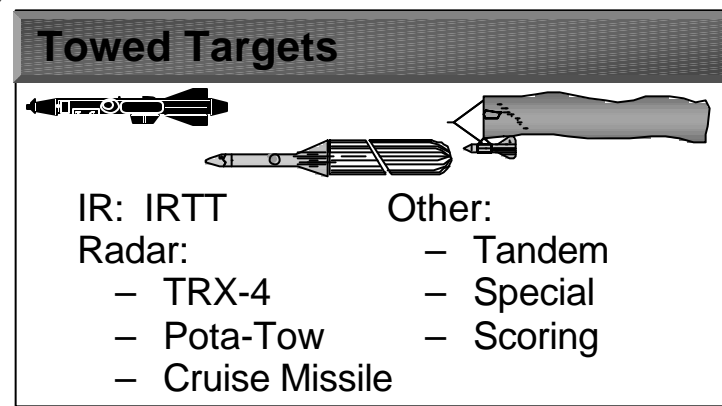
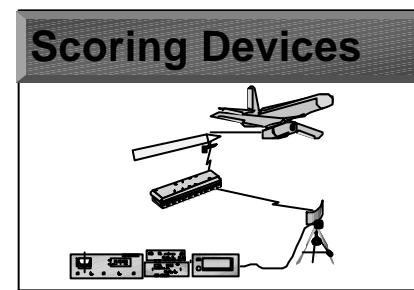
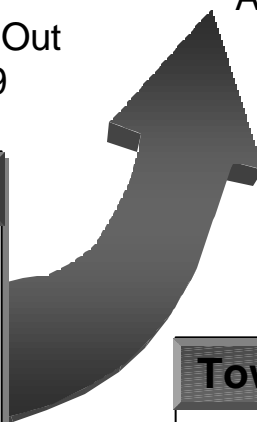
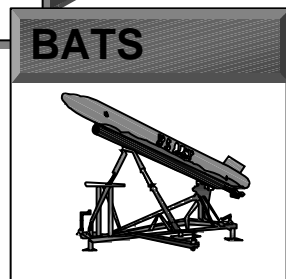
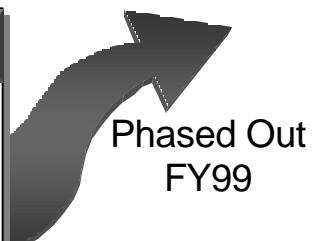
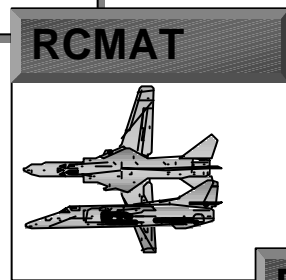
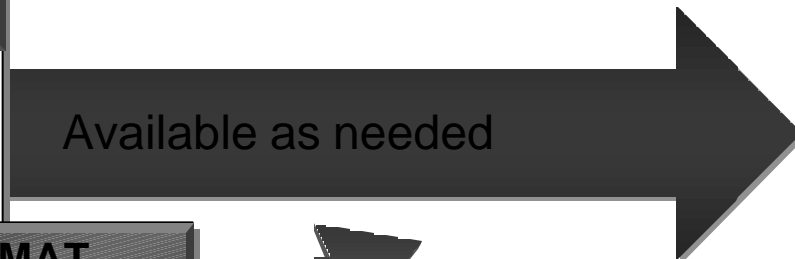
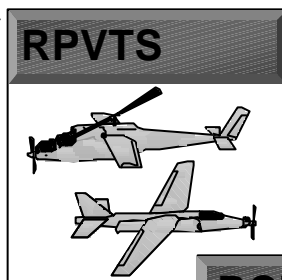




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ARMY AERIAL TARGET

TRAINING TARGET/BALLISTIC MISSILE





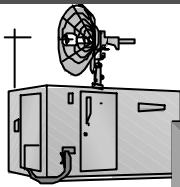
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ARMY AERIAL TARGETS

TARGET SERVICES

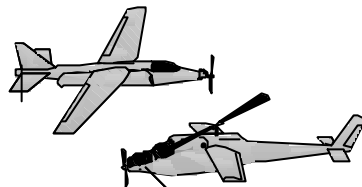


Ground Control



TTCS with Upgrades until MSTCS is fielded

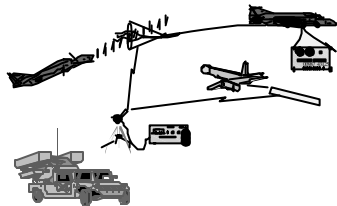
RPVTS Flight Services



Contractor Provided - Multiple locations

- Flight Control
- Scoring

Scoring Services

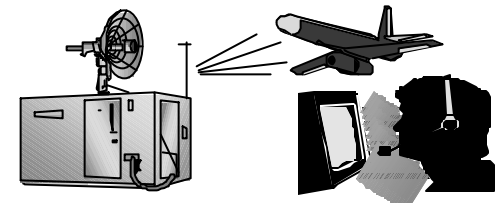


Contractor Provided - Multiple locations

- Bullets
- Missiles
- Area Weapons

Contractor Provided - Multiple locations

Combined Flight Services





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VIRTUAL TARGETS CENTER



- Creates high fidelity models for use in T&E and Training
- An efficient electronic distribution system Via Internet
- Inter-agency sharing of geometry models, eliminates duplication of effort
- Contains Model Archive and access to Modeling Expertise
- On-line since March 1999
- STRICOM - AMCOM cooperative effort benefits all DoD Model Users

EXAMPLES OF AERIAL VIRTUAL TARGETS



MQM-107



SU-25 Frogfoot

MODEL ARCHIVE

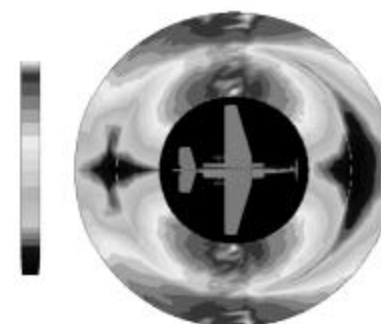


Models Obtained
by Collecting
or Creating

1386 Downloads
271 Users
124 Organizations

<http://vtcenter.redstone.army.mil>

USE OF VIRTUAL TARGETS IN ANALYSIS



*Optimizing location of IR
Augmentation Device on RPVT*



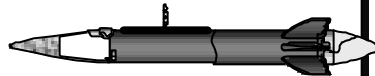
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EMERGING ARMY AERIAL TARGET REQUIREMENTS



Low RCS Tow Target

- Army Requirement
- Inexpensive
- NO detectable emissions
- Extremely low RCS
- Towed by a subscale target or manned aircraft
- Initiated in FY00; IOC in FY01

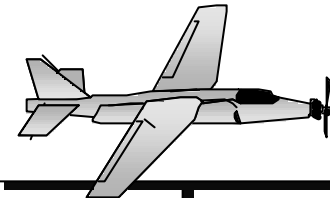


Towed Target

ADA Subscale Training Target

- Army requirement with other Service potential.
- Inexpensive target to support SHORAD training.
- Beyond Visual Range control capability.
- Multiple signatures.
- Potential new contract FY02.

Subscale Target



 Training  T&E



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EMERGING ARMY AERIAL TARGET REQUIREMENTS (CON'T)

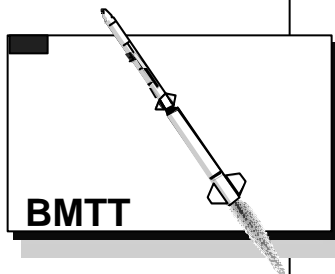


Common Digital Architecture (CDA)

- Army requirement with other service and industry potential.
- CDA establishes interface standards for all classes of targets.
- Increased performance and payload capacity of aerial targets.
- Universal Signal Processor/Vehicle Interface (USPVI) available FY01
- Common Avionics Package (CAP) combining data link, GPS, vehicle interface, and autopilot functions available FY02
- CAP interface to target is CDA



CDA



Tactical Ballistic Missile Training Target (TBMTT)

- Agreement with BMDO to provide short range TMD targets.
- Currently providing LANCE Missiles for short range TMD testing.
- Inexpensive target to support TMD training requirements.
- Currently in proposal evaluation.

■ Training □ T&E



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SUMMARY



- **The world is changing:**
 - Focus on fidelity to meet requirements
 - Leveraging resources
 - Increased emphasis on modeling and simulation
- **Industry participation needed.**
 - Procurement opportunities continue to exist
 - Cost effective technology (CDA & CAN Bus)
 - Life-cycle efficiencies
 - TMI Proposals
 - Teaming/Partnering



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VISIT US ON THE WEB...



ACQUISITION WEBPAGES



<http://www.stricom.army.mil>



<http://vtcenter.redstone.army.mil>